

June 2017



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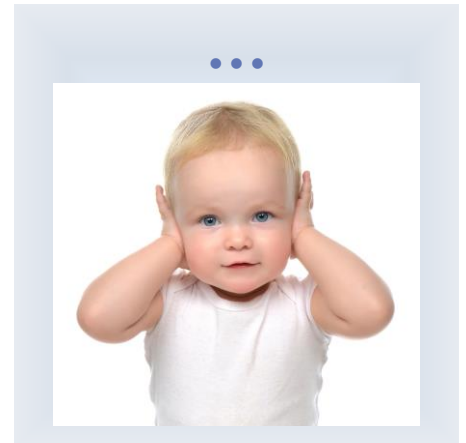
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# Introduction

Included in this document are recommended guidelines for newborn hearing screening in South Dakota birthing facility [both well-baby nursery and neonatal intensive care unit (NICU)].

- Congenital hearing loss of more than 40 deciBels (dB) affects two to three infants per 1,000 live births. <sup>1</sup>
- Early Hearing Detection and Intervention (EHDI) is the practice of screening every newborn for hearing loss prior to hospital discharge.
- The National Institutes of Health (NIH) Consensus Development Conference March 1993 recommended that all babies be screened for hearing loss prior to hospital discharge. <sup>2</sup>
- Federal actions and legislation have established the state's responsibility in developing and maintaining its EHDI program. EHDI programs exist in all 50 states and the District of Columbia. <sup>3</sup>
- States report annually their results of screenings and follow-up to the Centers for Disease Control (CDC).
- Components of an EHDI program are: screening (initial test for hearing loss), audiologic evaluation (to confirm hearing loss), and Early intervention (medical treatment, early intervention services and family support). <sup>2</sup>
- The EHDI Act of 2010 states that newborn and infant hearing loss programs should include:
  - Diagnostic services
  - Improvement of recruitment, retention, education, and training of personnel and providers participating in the program
  - Improvement of family access to early intervention
  - Reestablished the state's role in developing and monitoring the efficacy of statewide EHDI programs
- As of 2016, participation in the South Dakota EHDI program is voluntary to birthing facilities. South Dakota remains one of those states that do not have a state statute for universal newborn hearing screening. Regardless of whether a mandate exists or not, all screening, follow-up, and tracking procedures must be consistent with national established EHDI guidelines. <sup>3</sup> This toolkit serves as a resource for personnel and providers to ensure that these minimum guidelines are followed. The screening protocols suggested within this toolkit were developed by local experts, based on nationally accepted guidelines put forth by the Joint Committee on Infant Hearing (JCIH) and in collaboration with the South Dakota EHDI program. Additional resources and support are available from the South Dakota EHDI program to assist with specific issues related to program development and management.



## *The Role of the Medical Home in Identifying Children with Hearing Loss*

The primary care physician is to be the center of the medical home, as they are an active participant in the family's life during a baby's first year. The primary care physician's role in EHDI to:

- Discuss results of the newborn hearing screening
- Help parents navigate the steps of the EHDI program
- Motivate families to proceed through the steps of the EHDI program in a timely manner
- For those babies diagnosed with hearing loss:
  - Discuss the impact of hearing loss with families
  - Refer the family to geneticist, ophthalmologist, and ENT/otologist
- Identify if baby has risk factors for hearing loss; if so, provide monitoring for hearing loss

Successful EHDI programs require a coordinated continuum of care composed of:

- parental education
- newborn hearing screening
- audiologic assessment
- amplification (if elected by the parent)
- intervention services

Multiple professionals contribute to the EHDI process. These professionals need to work together and clearly communicate follow-up steps to parents/guardians to ensure:

- early diagnosis of hearing loss
- quality of follow-up care

Medical Home staff plays a critical role in this process by helping parents navigate the EHDI process. The medical home is essential in ensuring that those infants who do not pass newborn hearing screening, and subsequent outpatient rescreening, receive the assessment referrals to pediatric audiologists and early interventionists necessary for that child's future success.

*\*Information courtesy of NCHAM*





# Importance of Early Detection and Intervention for Hearing Loss

## KNOW THE FACTS:

Hearing loss is the most common congenital condition in the United States, affecting 2-3 of every 1,000 children at birth. <sup>1</sup> Many more children will go on to develop hearing loss by school age. Hearing loss may result in delayed development in language, speech, and learning. <sup>3</sup> Early Hearing Detection and Intervention Programs (EHDI) programs have been developed to maximize language and learning for children who are deaf or hard of hearing. It is important that all medical and educational providers caring for children be familiar with and follow best practice guidelines for identification and timely intervention for hearing loss.



## Get Started Right Away

Auditory input at an early age is needed for speech and language development as well as social and cognitive development. <sup>4,6</sup> Early identification is crucial for the development of:

- Spoken language
- Reading
- Auditory learning
- Neural connections to grow throughout the brain

Children who are identified with hearing loss by six months of age have better developmental outcomes than children identified at an older age.

<sup>6</sup>This means:

- Better expressive and receptive language
- Higher vocabulary
- Higher verbal reasoning

Children with untreated hearing loss are at risk for:

- Isolation and withdrawal from social interactions
- Adverse effects on social, cognitive, and psychosocial development
- Learning difficulties, repeating classes, and under performance on educational testing when compared to peers with no hearing loss (even those with minimal hearing loss may face difficulties)
- Being distracted or displaying disruptive behaviors as reported by their teachers <sup>7</sup>





*The benefits of early intervention, which can only be possible with early identification and diagnosis, support the importance of healthcare professionals being aware of the recommended steps to take with a child who may have a hearing loss.*

## EHDI Program Procedures

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The goal of an EHDI program is to identify hearing loss in children at a young age and ensure that intervention is provided early to help all children develop communication and psychosocial abilities commensurate with their cognitive abilities. To meet this larger goal, the Centers for Disease Control (CDC) and other organizations developed a series of sub-goals to enhance the success of the EHDI program.

- **Goal 1:** All newborns will be screened for hearing loss no later than 1 month of age, preferably before hospital discharge.
- **Goal 2:** All infants who did not pass the initial screening will undergo diagnostic audiologic evaluation, with the hearing loss being diagnosed no later than 3 months of age.
- **Goal 3:** All infants identified with a hearing loss will receive appropriate and family centered early intervention services no later than 6 months of age.

Goals 1-3 are commonly referred to as the 1-3-6 timeline. Tables 1 and 2 below provide a visual representation of the recommended timelines within the EHDI program. Table 1 represents the general 1-3-6 timeline, while Table 2 represents a detailed algorithm for the 1-3-6 timeline including possible outcomes and required referrals at each step.

- **Goal 4:** All infants and children with late onset, progressive or acquired hearing loss will be identified at the earliest possible time.
- **Goal 5:** All infants with hearing loss will have a medical home.
- **Goal 6:** Every state will maintain an EHDI program to track and provide surveillance that will minimize the number of children who are lost to follow-up.
- **Goal 7:** Every state will have a comprehensive system that monitors and evaluates the progress towards the EHDI Goals and Objectives.
- (Additional information about EHDI can be found at [NCHAM](#).)



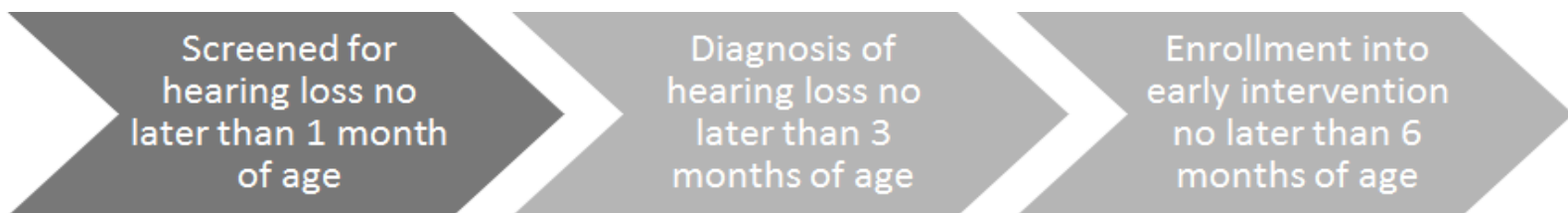
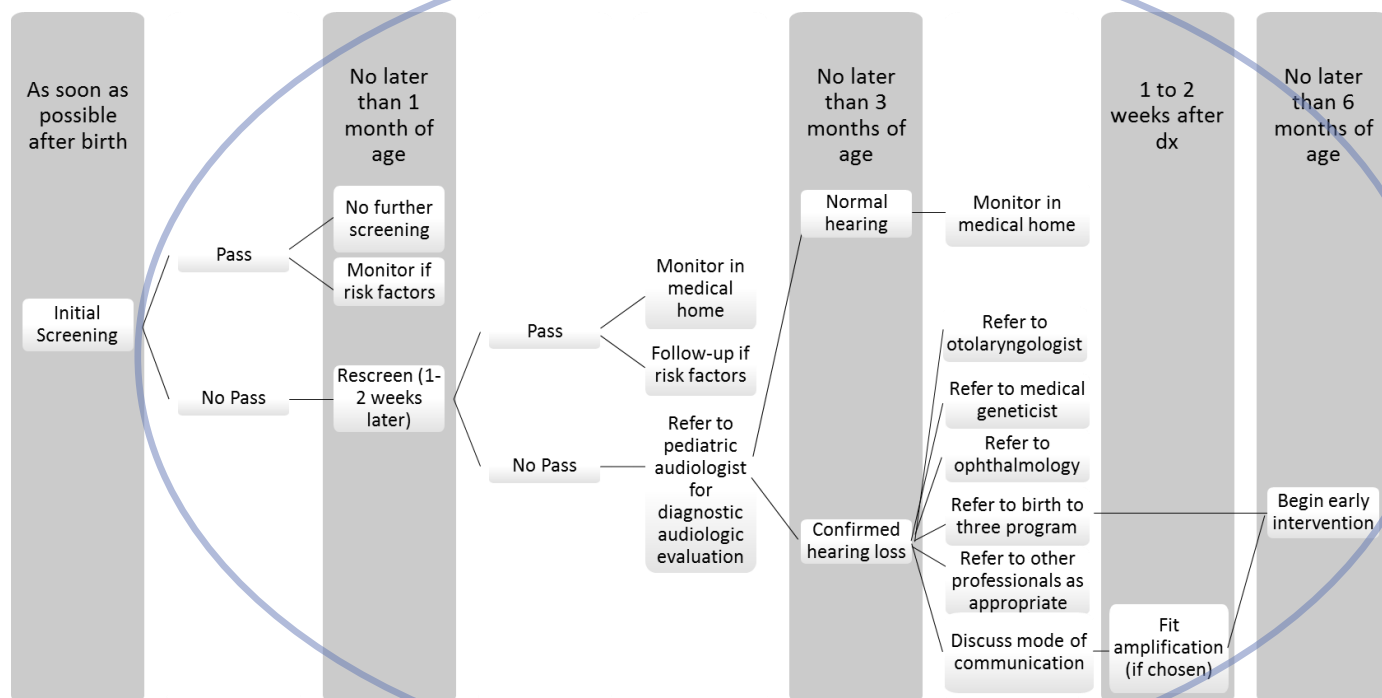


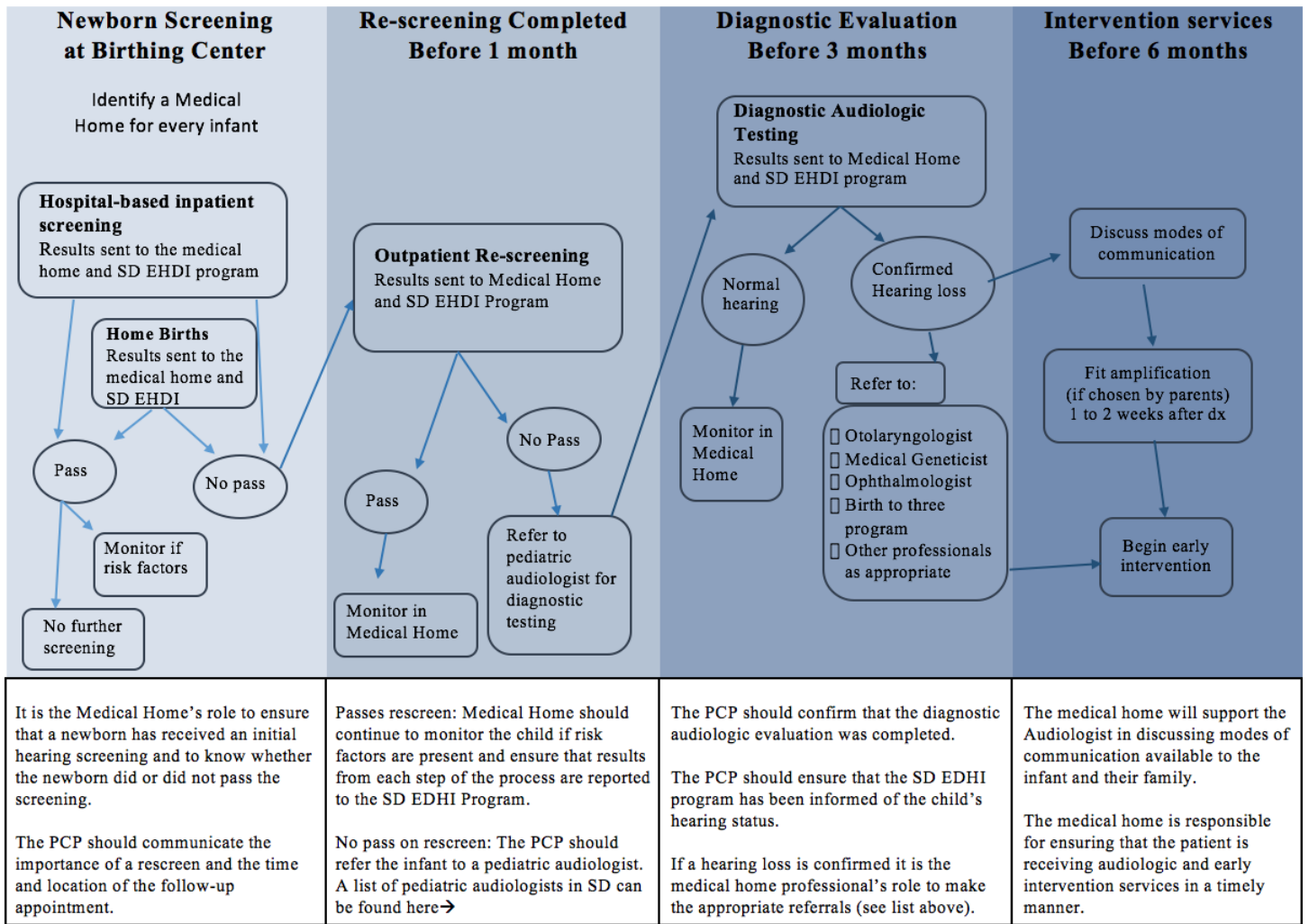
Table 1.



The medical home is critical at all steps of the EHDI process. The medical home is responsible for ensuring that a child passes through each necessary step of the EHDI process.



# Medical Home's Role Within the EDHI Program Procedures



<https://doh.sd.gov/family/newborn/AudClnics.pdf>

*\*Information courtesy of NCHAM*





# Medical Home and Hearing Screening



## Out-Patient Hearing Screening

Out-patient hearing screening/rescreen should be completed prior to 1 month of age.

### How to conduct an out-patient hearing screening:

- Babies initially screened with OAE can be rescreened with OAE or aABR.
- Babies initially screened with aABT MUST be rescreened with aABR.
- Babies who had a NICU stay greater than 5 days that “referred” their initial screening should be scheduled with a pediatric audiologist for diagnostic evaluation.
- Both ears should be screened at out-patient hearing screening: even if they only were “referred” in one ear on the initial screen.
- Infants should ONLY be screened one time at their out-patient hearing screening.

### If the infant “passes” the out-patient hearing screen:

- Provide verbal and written results to parents.
- Continue to monitor their hearing.

### If the infant “refers” the out-patient hearing screen:

- Provide verbal and written results to parents.
- Refer for comprehensive audiological evaluation by 3 months of age (90 days). It is best to schedule this right away to ensure that testing can be done without sedation.



## Screening Considerations for Neonatal Intensive Care Unit (NICU)

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Infants with a NICU stay greater than 5 days are included under separate NICU guidelines due to their higher risk of neural hearing loss. NICU babies are also at increased risk of late-onset hearing loss; ongoing monitoring is recommended.

## Monitoring for Late Onset Hearing Loss

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Late onset hearing loss can occur any time after birth: Babies who pass their initial screening test can still develop a hearing loss.

During well baby health care visits, the medical home professional should determine if there is a presence of risk factors for infants developing a late onset hearing loss. Every child with 1 or more risk factors should have ongoing developmentally appropriate hearing screening and at least 1 diagnostic audiology assessment by 24-30 months of age, even if they passed the newborn screening. For additional information, please access the link to the AAP guideline, "Hearing Assessment in Infants and Children: Recommendations beyond Neonatal

Screening." <http://pediatrics.aappublications.org/content/124/4/1252>

## Middle Ear Effusion Considerations

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The presence of middle ear effusion should not be a reason to delay a referral for diagnostic audiology testing. Audiology results can assist the Primary care physician and ENT with decision making for appropriate management of the child. Below is a link for the document Otitis media, Tympanostomy tubes, and Clinical practice guidelines from 2013.

<https://www.entnet.org/sites/default/files/2014BulletinKidsENT2013GuidelineSummary.pdf>



# Medical Home Professional; Hearing Screening Discussion with Parents

## Pass Script (initial screen or re-screen)

Your baby passed the hearing screen. The screen indicates how baby is hearing at the time of the screen. Sometimes hearing can change. We will continue to monitor baby's hearing and speech and language development. Please let me know if you have concerns in the future about your child's hearing.

## Pass Script (babies at high risk for hearing loss)

Your baby passed the hearing screen. Since your baby has the following risk factors *[list risk factors]*, there is a chance that a hearing loss can develop after the newborn period. We will refer your baby to an audiologist that will monitor your baby's hearing. We will also continue to monitor your baby's development. If at any time you have any concerns about your baby's hearing, please let me know. Here is a copy of your baby's screening results. Do you have any further questions?

## Refer (initial screening)

Your baby did not pass the hearing screen for one/both ears. Reasons for not passing include birthing debris in the ear canal or fluid in the middle ear, or a possible hearing problem. This does not mean that baby has a hearing loss, but baby needs to be rescreened (Script will depend on protocol in your area, but please make sure baby has been scheduled for a rescreen to be done at 2 weeks and encourage them to keep that appointment).

## Refer (re-screen)

Results indicated that further testing needs to be done. Here is a copy of your child's screening results. This does not necessarily mean that your child has a hearing loss. However, it is important to identify any possible hearing issues as soon as possible so that your child has the best chance for on-time development. Before we go ahead and schedule an appointment with the audiologist, do you have any further questions?

## If Child is Diagnosed



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The results indicated that your child has hearing loss. At this time, we should get your child enrolled in the early intervention services to help their speech and language development. Other referrals that should be made include an eye exam with an ophthalmologist, and a visit to an ENT physician. We would also like to offer genetics consultation for your child (insurance coverage varies). Do you have any further questions?

#### What to make sure you include (keep it simple):

- Avoid using words such as “failed” and “deaf”—these words provoke anxiety.
- Reassure the family that there are several reasons why their child might not pass the screening and that further testing will clarify how the infant is hearing— However do not dismiss the results and impress the importance of completing a rescreen at 2 weeks of age or a referral for diagnostic testing if indicated.
- Inform them that early detection of hearing loss is important for language development and minimizing the effects of hearing loss on the child’s communication abilities.
- Inform parents that the hospital will schedule follow-up testing prior to the child’s discharge—or—give them the contact information for the audiology clinic and send a referral to the clinic (depending on the hospital/facility’s protocol).

#### How to answer questions parents may have after they are informed their child needs further testing:

- What do I need to do to complete the testing?
  - *“You will need to maintain the follow up appointment with the audiologist or contact an audiologist from the list we will provide you. You may call the number provided for the audiologist nearest you and make an appointment. Your primary care provider will also receive information regarding your child’s needs.”*
- What will the Audiologist do?
  - *“They will do a more comprehensive evaluation and might perform an OAE or ABR again. This hearing expert will do more complete tests to determine if there is a hearing loss, how significant the hearing loss is, and what can be done to help them.”*
- Will the test be painful for my baby?
  - *No, most babies sleep through the screening and the procedure does not cause any harm.”*
- To get this over with as soon as possible, can I see the Audiologist before I leave?
  - *“It is best for your baby to wait until he/she is a little older in order to get a valid and complete diagnostic test.”*
- Why can my child receive a hearing screening now but has to wait to have a diagnostic test?
  - *“What we do at the hospital is just a screen. If there is a need for further testing it is best for your child to be older. A few extra weeks will allow for further neural maturation and allow for a more complete diagnostic evaluation.”*
- What if my baby really has a hearing loss?
  - *“Your audiologist will discuss the type and degree of hearing loss with you. From there, if a hearing loss is present, the professional will go through available options of helping your child communicate.”*

#### Some statistics



- 1-3 babies out of 1000 are born with a severe sensorineural hearing loss.
- 3 babies out of 1000 are born with a moderate sensorineural hearing loss.
- The risk of hearing loss is higher for infants who spend time in the NICU compared to well-baby nurseries.
- It is important to screen ALL babies because 50% of babies with hearing loss will have NO KNOWN risk factors or family history of hearing loss.
- Of the babies that refer on for further diagnostic testing, between 5-20% will have hearing loss.

*\*Script courtesy of NCHAM*





# Child Diagnosed with Hearing Loss- Patient Checklist for Medical Home Professionals

## General

- ☐ Document family history of hearing loss
- ☐ Confirmation of hearing loss from Audiologist
- ☐ Encourage a form of communication (hearing aids, cochlear implants; if chosen)
- ☐ Refer to Early Intervention Services if under 3 years old or child's school district if older than 3 years of age
- ☐ Provide information material about:
  - Speech, language, and hearing developmental milestones
  - Resources for family support
  - Causes of hearing loss

## Medical Evaluation

- ☐ Otolaryngology
- ☐ Pediatric Audiology
- ☐ Geneticist
- ☐ Ophthalmology
- ☐ Developmental pediatrics, neurology, cardiology, nephrology
- ☐ Other: EKG, UA, CT, MRI

## Continual Care

- ☐ Give parents information and resources about speech, language, and hearing developmental milestones.
- ☐ Identify and treat any middle ear effusion complications- may further compromise hearing.
- ☐ Ongoing referral to professionals as needed and monitoring of hearing loss.
- ☐ Note risk indicators for later onset hearing loss. If present, refer to audiologist for full evaluation prior to 30 months of age.



# Risk Factors for Hearing Loss

Risk indicators are associated with delayed onset or progressive hearing loss in children.

<b>A family history of permanent childhood hearing loss.</b>	<ul style="list-style-type: none"> <li>Family member(s) born with hearing loss.</li> <li>Family member(s) with hearing loss identified in childhood that was not caused by a medical condition (e.g. ear infections).</li> <li>Family member(s) with known cause of hearing loss (e.g. rubella, meningitis, noise exposure, age) are excluded.</li> </ul>
<b>NICU stay of more than 5 days or with any of the following regardless of length of stay.</b>	<ul style="list-style-type: none"> <li>ECMO</li> <li>Assisted ventilation</li> <li>Exposure to ototoxic medication (e.g. aminoglycosides or loop diuretics). <ul style="list-style-type: none"> <li>Aminoglycosides can damage hair cells in the inner ear resulting in sensorineural hearing loss-- common used include: <ul style="list-style-type: none"> <li>Streptomycin, neomycin, kanamycin, amikacin, viomycin, vancomycin, gentamicin, and tobramycin.</li> </ul> </li> </ul> </li> </ul>
<b>Exposure to in-utero infection.</b>	<ul style="list-style-type: none"> <li>Toxoplasmosis: infected during or just before pregnancy- especially during the 1st trimester.</li> <li>Group B strep (GBS): sick infant with positive GBS culture.</li> <li>Syphilis: infected during pregnancy.</li> <li>Rubella: infected primarily during the 1st trimester.</li> <li>Cytomegalovirus (CMV): can be transmitted through placenta, birth canal, or postnatally through breast milk.</li> <li>Herpes Simplex Virus (HSV).</li> </ul>
<b>Hyperbilirubinemia.</b>	Requiring exchange transfusion.
<b>Ear malformation/Craniofacial anomalies.</b>	Involving pinna, ear canal, ear tags, ear pits, and temporal bone anomalies.
<b>Syndromes commonly associated with hearing loss.</b>	Down, Usher, Warrensburg, and Neurofibromatosis.
<b>Head Trauma.</b>	Specifically ones that require hospitalization.
<b>Neurodegenerative disorders.</b>	
<b>Chemotherapy.</b>	
<b>Meningitis.</b>	Particularly bacterial meningitis.
<b>Parental concerns.</b>	Any concerns regarding hearing, speech, language or development delays.



# Resources for Parents

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## **Websites:**

[My Baby's Hearing](#)

<http://www.babyhearing.org/hearingamplification/NewbornScreening/index.asp>

[Healthy Children](#)

<https://www.healthychildren.org/English/ages-stages/baby/Pages/Purpose-of-Newborn-Hearing-Screening.aspx>

[National Center for Hearing Assessment and Management](#)

<http://www.infanthearing.org/screening/>

[Centers for Disease Control](#)

<http://www.cdc.gov/features/newbornhearing/>

[American-Speech Language-Hearing Association](#)

<http://www.asha.org/public/hearing/Hearing-Testing/>

[Oregon Health Authority](#)

<http://public.health.oregon.gov/HealthyPeopleFamilies/Babies/HealthScreening/HearingScreening/Pages/index.aspx>

[Pediatric Audiology Link to Services](#)

<http://www.ehdipals.org/>

## **Online Brochures:**

[Newborn Hearing Screening: What, When, & Why](#)

<https://doh.sd.gov/documents/Family/Newborn.pdf>

[Hearing Screening Pass](#)

<http://www.dhcs.ca.gov/services/nhsp/Documents/Brochures/Pub834PF.pdf>

[Hearing Screening Referral](#)

<http://www.dhcs.ca.gov/services/nhsp/Documents/Brochures/Pub845PF.pdf>

[Universal Newborn Hearing Screening \(UNHS\)](#)

[http://www.infanthearing.org/statematerials/description/OH\\_A%20Sound%20Beginning...%20%20Parent%20Information.pdf](http://www.infanthearing.org/statematerials/description/OH_A%20Sound%20Beginning...%20%20Parent%20Information.pdf)

## **Online Video:**

[Child Hearing Test](#)

<http://www.agbell.org/Document.aspx?id=1142>



# Speech and Language Developmental Milestone

**If you baby is this old... .... he or she should:**

Birth- 3 months	<ul style="list-style-type: none"> <li>▪ Be startled by loud noises</li> <li>▪ Be soothed by familiar voices</li> <li>▪ Make vowel sounds (ooh, ahh)</li> <li>▪ Squeal or coo</li> <li>▪ Giggle or Laugh</li> </ul>
3-6 months	<ul style="list-style-type: none"> <li>▪ Make lot of sounds</li> <li>▪ Enjoy babbling</li> <li>▪ Make high and low sounds</li> <li>▪ Like toys that make noise or sing</li> <li>▪ Turn his or her head to follow sounds</li> </ul>
6-9 months	<ul style="list-style-type: none"> <li>▪ Responds to his or her name</li> <li>▪ Play with sounds by repeating them</li> <li>▪ Understands “no” and “bye”</li> <li>▪ Says “da-da” or “ma-ma”</li> </ul>
9-12 months	<ul style="list-style-type: none"> <li>▪ Recognize emotions in speech (Responds differently to happy/angry voices)</li> <li>▪ Babble in response to voices</li> <li>▪ Have 2-3 new words</li> <li>▪ Stop when he/she hears “no”</li> </ul>
12-18 months	<ul style="list-style-type: none"> <li>▪ Be able to identify people, parts of the body (e.g. head, foot), and toys</li> <li>▪ Name what he/she wants</li> <li>▪ Talk in sentences with a few words that people can understand</li> <li>▪ Use gestures with speech (e.g. hand waving)</li> <li>▪ Bounce to music</li> <li>▪ Repeat some words</li> </ul>
18-24 months	<ul style="list-style-type: none"> <li>▪ Follow simple directions</li> <li>▪ Speak in two-word phrases</li> <li>▪ Have a vocabulary of about 20 words</li> <li>▪ Recognize other sounds (e.g. cars, dogs, vacuum, doorbell)</li> </ul>



# Pediatric Audiology Diagnostic Sites in South Dakota

Audiology Services in South Dakota									
Audiology Clinic	Age by Months	Screening			Diagnostic Assessments				
		*ABR	*OAE	*Tymps	*ABR - Toneburst/Click *ABR - Bone *High Frequency Tympanometry	*TEOE	*DPOE	*VRA	*Behavioral Observation Audiometry *Sedation to perform ABR *Fitting/Dispensing for Hearing Aids
<b>Audiology Clinics</b>									
<b>Avera McKennan Hospital Audiology Clinic Plaza 2</b> (605) 322-5039 1301 South Cliff Avenue Sioux Falls, SD 57105	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Avera Medical Group Ear Nose and Throat Yankton</b> (605) 665-6820 409 Summit Suite 3200 Yankton, SD 57078	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Ear, Nose and Throat Associates, P.C.</b> (605) 665-0062 2525 Fox Run Parkway, Suite 101 Yankton, SD 57078	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Midwest Ear, Nose and Throat; Hearing Center</b> (605) 336-3503 2315 West 57th Street Sioux Falls, SD 57108	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Professional Hearing Services, Inc.</b> (605) 882-1591 405 18th Avenue NE Watertown, SD 57201	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Rapid City Medical Center</b> (605) 342-3280 101 East Minnesota Street Rapid City, SD 57701	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Regional Medical Clinic</b> (605) 755-5671 2805 5th Street Rapid City, SD 57701	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Sanford ENT</b> (605) 328-8200 1310 West 22nd Street Sioux Falls, SD 57105	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Schwab Audiology, Inc.</b> (605) 725-4455 3001 6th Avenue SE Suite 2 Aberdeen, SD 57401	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>South Dakota School for the Deaf</b> (605) 367-5200 2001 East 8th Street Sioux Falls, SD 57103	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>South Dakota School for the Deaf - WEST RIVER CLINIC</b> (605) 791-7839 2138 Jackson Blvd Rapid City, SD 57702	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>University of South Dakota - Speech and Hearing Clinic</b> (605) 677-5474 414 East Clark Street Vermillion, SD 57069	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
<b>Yankton Medical Clinic</b> (605) 665-1722 1104 West 8th Street Yankton, SD 57078	0-6 months	•	•	•	•	•	•	•	•
	7-12 months	•	•	•	•	•	•	•	•
Facilities shaded in green offer comprehensive pediatric audiologic diagnostic testing									
*Definitions ABR - Auditory Brainstem Response OAE - Otoacoustic Emissions Tymps - Tympanometry ABR Toneburst/Click - Auditory Brainstem Response toneburst and equipment click stimulus. ABR Bone - Auditory Brainstem Response Bone Conduction High Frequency Tympanometry TEOE - Transient Evoked Otoacoustic Emissions DPOE - Distortion Product Otoacoustic Emissions VRA - Visual Reinforcement Audiometry									



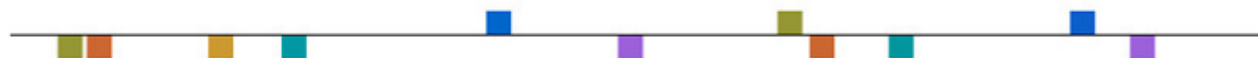


# South Dakota Newborn Hearing Screening Checklist

This checklist is for parents along with professionals to follow EHDI's expected guidelines for screening an infant along with developmental milestones the parent can observe. The visual organization chart allows parents to keep track of their future appointments.

<div data-bbox="178 336 454 462"> <p><b>Typical Milestones</b></p> </div> <div data-bbox="162 483 503 577"> <p>Use these milestones to observe your baby's hearing development as they grow.</p> </div> <div data-bbox="162 588 503 787"> <p><i>Birth to 3 Months:</i></p> <ul style="list-style-type: none"> <li>o Reacts to loud sounds</li> <li>o Calms down when recognizes familiar voice when spoken to</li> <li>o Coos and makes pleasure sounds</li> <li>o During feeding, start or stops sucking in response to sound</li> </ul> </div> <div data-bbox="162 787 503 966"> <p><i>4 to 6 Months:</i></p> <ul style="list-style-type: none"> <li>o Moves eyes toward sounds</li> <li>o Babbling sounds that begin with p, b, m</li> <li>o Laughs and vocalizes excitement</li> <li>o Responds to changes in tone of your voice</li> </ul> </div> <div data-bbox="162 966 503 1176"> <p><i>7 Months to 1 Year</i></p> <ul style="list-style-type: none"> <li>o Turns and looks towards direction of sounds</li> <li>o Listens when spoken to</li> <li>o Imitates different speech sounds</li> <li>o Starts to respond to request</li> <li>o Has one/two words by first birthday</li> </ul> </div>	<div data-bbox="552 378 682 525"> </div> <div data-bbox="690 336 1445 577"> <p><b>BIRTH</b> Newborn Hearing Screening Date: ____/____/____</p> <p><i>Results:</i></p> <ul style="list-style-type: none"> <li><input type="radio"/> Pass: Your baby does not require and additional follow up</li> <li><input type="radio"/> Rescreen/Refer: Your child did not pass the hearing screen. An outpatient hearing screen has been scheduled for: Date: ____/____/____ Time: _____ Location: _____</li> </ul> </div> <div data-bbox="1461 399 1559 525"> </div> <div data-bbox="552 577 828 703"> <p><b>Before 1 Month Outpatient Hearing Screen</b></p> </div> <div data-bbox="885 577 1169 703"> <p><b>Before 3 Months Evaluation</b></p> </div> <div data-bbox="1226 577 1510 703"> <p><b>Before 6 Months Early Intervention</b></p> </div> <div data-bbox="527 714 852 1281"> <p><i>Results:</i></p> <ul style="list-style-type: none"> <li><input type="radio"/> Pass: Your baby does not require additional follow up, track typical developmental milestones.</li> <li><input type="radio"/> Did not pass: A diagnostic evaluation with a pediatric audiologist has been scheduled for: Date: ____/____/____ Time: _____ Location: _____</li> </ul> </div> <div data-bbox="860 714 1193 1281"> <p><i>Results:</i></p> <ul style="list-style-type: none"> <li><input type="radio"/> If your baby passes evaluation, your baby does not require any additional follow up.</li> <li><input type="radio"/> If your baby has an identified hearing loss, the next steps are: Audiologic/Medical testing evaluation Date: ____/____/____ Time: _____ Location: _____ Any additional referrals: genetic evaluation, ENT, ophthalmology.</li> </ul> </div> <div data-bbox="1201 714 1575 1281"> <ul style="list-style-type: none"> <li><input type="radio"/> If your baby has a diagnosed hearing loss, enroll in Early Intervention program.</li> </ul> <p>Program: _____ Date: ____/____/____ Time: _____</p> <ul style="list-style-type: none"> <li><input type="radio"/> Learn about communication options</li> <li><input type="radio"/> Regular visits to a Pediatric Audiologist</li> </ul> <p><i>*Children who are involved in Early Intervention before six months are more likely to have age appropriate skills.</i></p> </div>
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*All results should be sent to primary care provider.*



## Reference List

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